

Applicants: Allan Green et al.
Serial No.: 09/837,751 Filed: April 18, 2001
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REMARKS

Claims 109-126, 131-139 and 144-146 were pending in the subject application. Applicants have hereinabove amended claims 114-116, 136-139, 144 and 146. Accordingly, claims 109-126, 131-139 and 144-146 are currently pending in the subject application.

In the April 20, 2005 Advisory Action, the Examiner maintained the rejection of claims 114-116, 136-139 (probably 136-138) and 144-146 on the basis that the claims are drawn to using portions of the *ghFAD2-1* gene that may be as small as 25 nucleotides, which the Examiner alleged is not enabled for the reasons of record and mentioned in the Interview Summary dated December 22, 2004.

In response, to advance prosecution of the subject application, applicants have amended claims 114-116, 136-139, 144 and 146 to recite a sequence of the *ghFAD2-1* gene such that reduced expression of the endogenous cotton *ghFAD2-1* gene in the seed of the cotton plant is achieved. One skilled in the art would understand that the optimal gene silencing construct for specific silencing would have the maximal degree of identity with the gene to be silenced and be unique for that gene, while having minimal identity with another gene. Applicants' disclosure on page 39, lines 12-26, provides a description of how to compare and obtain percentage similarity between any two or more sequences, specifically referencing the widely used, "GAP program, which utilizes the algorithm of Needleman and Wunsch (1970)." Page 85 of applicants' disclosure describes the specifics of the *ghFAD2-1* gene. Clearly, the regions of *ghFAD2-1* to be preferred for gene specific effect are described in applicants' specification. Indeed, the application of this knowledge was exemplified on page 93, beginning on line 4, and in Examples 16 and 17 on pages 109-

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121, where a 92 nucleotide region from the 5'-UTR, specific for ghFAD2-1, was used.

Applicants also wish to also point out that the knowledge of which portions of the ghFAD2-1 gene to use is not critical. This conclusion is supported by actual experimentation as indicated in applicants' disclosure on page 113, line 31 to page 114, line 1: "Since similar results were obtained using different inverted repeat constructs, the modulation of fatty acid content obtained using inverted repeat sequences is not dependent on the precise nature of the inverted repeat in the gene construct".

Finally, for the record, applicants also point out that experimentation in the area of gene silencing in plants has shown that inverted repeats comprising as little as 21 nucleotides of a target gene sequence are effective for reducing expression.

Accordingly, applicants believe this Supplemental Amendment resolves the sole remaining basis for the rejection of claims 114-116, 136-138 and 144-146.

In view of the amendments and remarks hereinabove, applicants respectfully request that the Examiner reconsider and withdraw the rejection set forth in the April 20, 2005 Advisory Action and earnestly solicit allowance of all pending claims 109-126, 131-139 and 144-146.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

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No fee, other than the enclosed \$120.00 fee for a one-month extension of time is deemed necessary in connection with the filing of this Supplemental Amendment. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents, P.O. Box 1450
Alexandria, VA 22313-1450.

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